STATUS OF CLAIMS

Claims 1 - 10 are pending.

Claims 1 - 10 stand rejected.

Claims 1, 3 and 8 have been amended without prejudice herein.

New Claim 11 has been added herein without prejudice.

REMARKS

Drawings

The drawings stand objected to because Figure 1 does not include units for the x-axis and y-axis. Applicant has amended Figure 1, without prejudice, herein to include units for the x-axis and y-axis (Hz, G, respectively). Accordingly, Applicant submits all requirements with regard to the figures have been met, and respectfully requests reconsideration and removal of the objections to the drawings.

Claim Objections

Claims 1 – 10 stand objected to as including informalities. Applicant has amended the Claims consistent with the Examiner's suggestions. Accordingly, Applicant submits all requirements with regard to the claim objections have been met, and respectfully requests reconsideration and removal of the objections to the Claims.

35 U.S.C. §112, Second Paragraph, Rejections

Claims 1 – 10 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter Applicant regards as the invention. Applicant has amended the claims to overcome these rejections. Accordingly, Applicant submits all requirements with regard to the 35 U.S.C. 112, second paragraph, rejections have been overcome, and Applicant respectfully requests reconsideration and removal of these Claim rejections.

35 U.S.C. §103(a) Rejections

Claims 1 - 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kurtz (United States Patent No. 5,473,944) in view of Koehler (United States Patent No. 4,479,385). Applicant respectfully traverses these rejections for at least the following reasons.

35 U.S.C. §103(a) sets forth in part:

> [a] patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

To establish a prima facie case of obviousness, all of the recited claim limitations must be taught or suggested in the prior art. *See, MPEP 2143.03; see also, In re. Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).* Further, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings. *See, M.P.E.P. §706.02(j); see also, In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).* That is, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *See, M.P.E.P.*

§2143.01; see also, In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Further yet, a prior patent must be considered in its entirety (i.e., as a whole), including portions that would lead away from the invention at issue. *See, Panduit Corp. v. Dennison Manuf. Co., 810 F.2d 1561, 1 USPQ2d 1593 (Fed. Cir. 1987).*

Amended Claim 1 recites in part, "a mass coupled to only the diaphragm associated with said first resonant beam to enable said first beam to alter a resonant frequency according to an applied acceleration with said second resonant beam relatively unaffected by said applied acceleration." Applicant respectfully submits Kurtz and Koehler, both individually and in combination, fail to teach or suggest such a limitation. Further, Applicant respectfully submits a proper motivation to combine the teachings of Kurtz and Koehler is lacking.

The present Office action admits Kurtz fails to teach the claimed mass.[1] Applicant respectfully submits Koehler fails to remedy this admitted shortcoming of Kurtz. Instead, the embodiment of Figure 4 of Koehler teaches a resonator 40 including an inactive member 20 and an additional resonator 42. *U.S. Pat. 4,479,385, col. 4, lines 45 – 53.* The resonator 40 assumedly takes the form of resonator 10 of Figure 1, as no explicit teaching as to its particular construction is present. The resonator 10 of Koehler includes a spacer mass 20 coupled to upper and lower resonators 11, 12 themselves. *See, e.g., U.S. Pat. 4,479,385, Fig. 1; see also, col. 2, lines 64 – 67.* Thus, Koehler fails to teach "a mass **coupled to only the diaphragm associated with**

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[1] "The only difference between the prior art [Kurtz] and the claimed invention is a mass coupled to only one of the resonant beams." *5/7/2004 Office action, par. 6, lines 5 – 7.*

said first resonant beam to enable said first beam to alter a resonant frequency according to an applied acceleration", in at least that Koehler explicitly teaches its spacer mass 20 to be coupled to first and second resonators 11, 12 themselves.

Accordingly, as Kurtz and Koehler each fail to teach or suggest the recited "mass coupled to only the diaphragm associated with said first resonant beam" of Claim 1, clearly their combination also fails to teach or suggest such a feature.

Further, Koehler expressly teaches the embodiment of Figure 4 thereof suffers "a sacrifice of a factor of two in acceleration sensitivity." *See, U.S. Pat. 4,479,385, col. 4, lines 45 – 48.* While, it also teaches " [a] useful accelerometer must be sensitive to desired accelerations." *See, U.S. Pat. 4,479,385, col. 1, lines 13 – 15.* Accordingly, Applicant respectfully submits a proper motivation for combining the references as argued is lacking – in at least that Koehler explicitly teaches sensitivity is important and that the embodiment of Figure 4 thereof sacrifices sensitivity.

Accordingly, Applicant respectfully traverses this rejection of Claim 1, and requests its reconsideration and removal. Applicant also respectfully requests the reconsideration and removal of these rejections to Claims 2 – 10, at least by virtue of these Claims' ultimate dependency upon patentably distinct base Claim 1.

New Claim 11

Applicant has added new Claim 11 herein, without prejudice. New Claim 11 recites, in part, "[a]n accelerometer comprising: a beam diaphragm sensor having **only first and second dielectrically isolated resonant beams**." Applicant respectfully submits the teachings of Koehler are explicitly inconsistent with such a limitation.

More particularly, Koehler explicitly teaches,

> At a sacrifice of a factor of two in acceleration sensitivity, the cantilever structure may be configured as shown in FIG. 4 with one active resonator member 40 and one inactive beam member 41. With this embodiment of the invention, an additional "thermally matched", but not mass loaded, resonator 42 is used in a difference frequency operational mode to achieve an acceleration sensitive difference frequency that is not temperature dependent.

Thus, Koehler teaches the use of at least three beams (at least two (i.e., 11, 12) in resonator 40 and at least one in the resonator 42. Accordingly, new Claim 11 patentably distinguishes over Kurtz and Koehler, both singularly and in combination, as well as the other cited references of record, and should be allowed. Such allowance is respectfully requested.

CONCLUSION

Wherefore, Applicant believes he has addressed all outstanding grounds raised by the Examiner and respectfully submits the present case is in condition for allowance, early notification of which is earnestly solicited.

Should there be any questions or outstanding matters, the Examiner is cordially invited and requested to contact Applicant's undersigned attorney at his number listed below.

Respectfully submitted,

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Annotated Marked-up Drawings

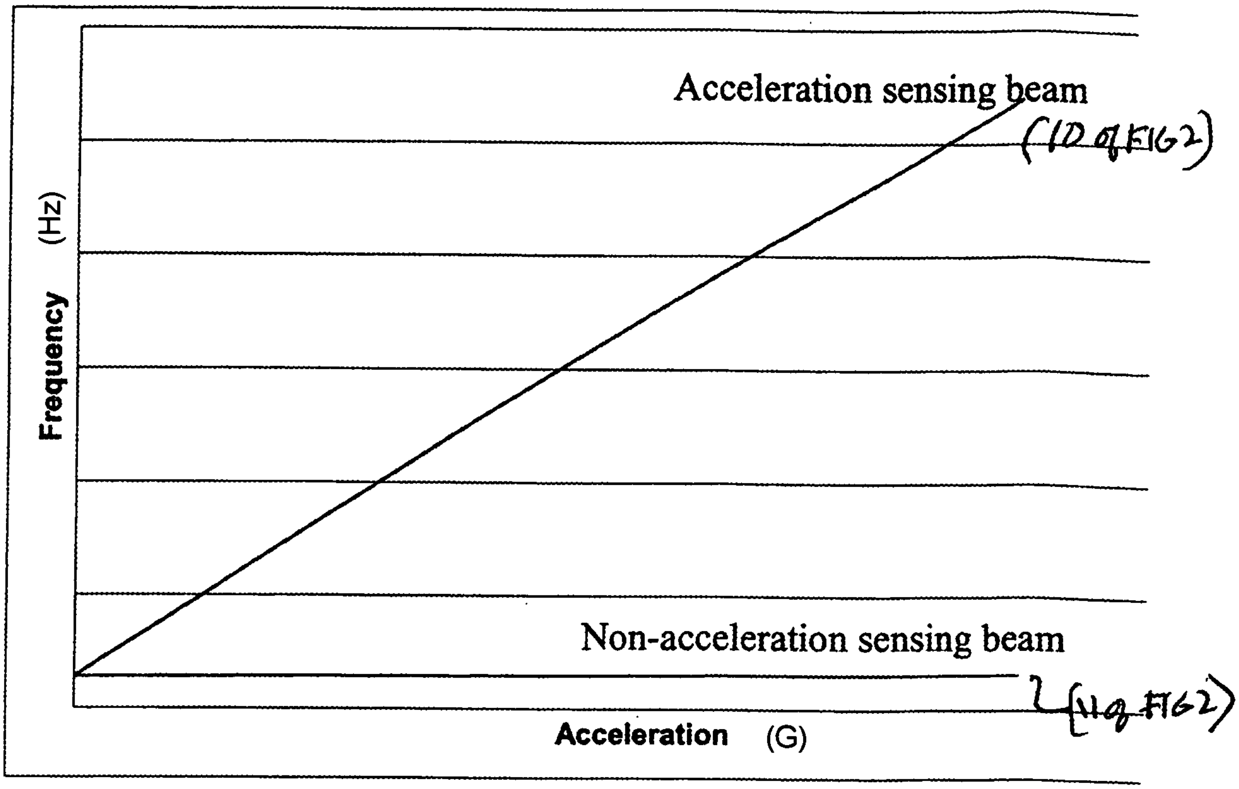

FIG. 1

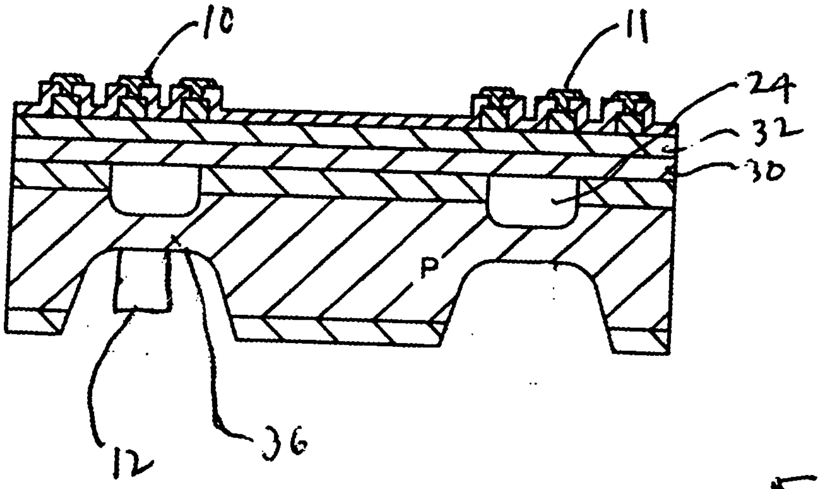

FIG. 2